INTERMEDIATE MACROECONOMICS

MACROECONOMIC CONCEPTS
5. INFLATION

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DEFINITION OF INFLATION

- price level P(t): the general level of prices
- inflation rate π(t): the rate at which the price level changes

$$\pi(t) = \frac{P(t) - P(t-1)}{P(t-1)}$$

- rise in the price level ($\pi(t)>0$): inflation
- decline in the price level ($\pi(t)<0$): deflation
- two measures of P(t): GDP deflator and CPI

GDP DEFLATOR

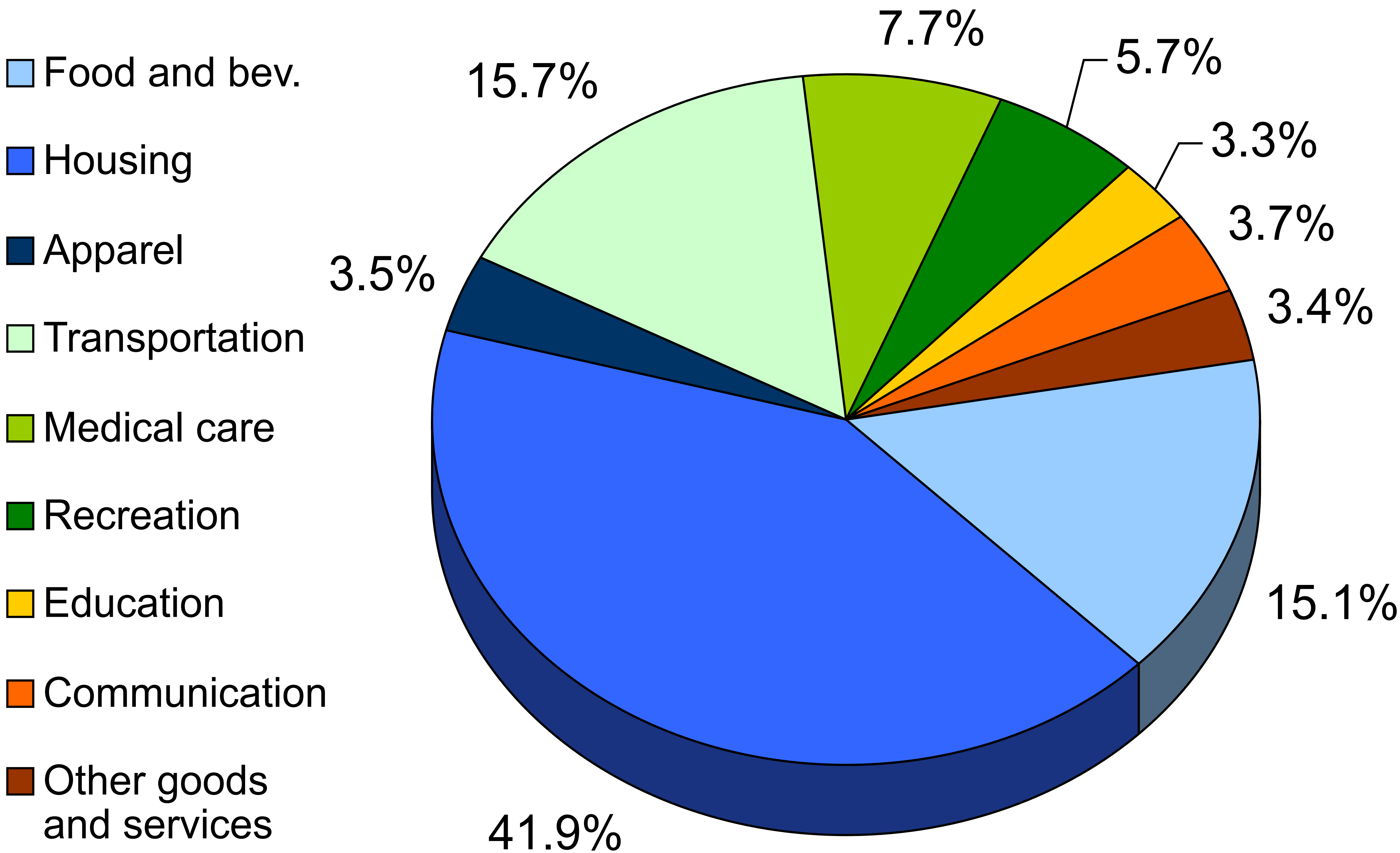
$$\text{GDP deflator} = \frac{\text{nominal GDP}}{\text{real GDP}}$$

- an index, without economic interpretation: 1 in base year
- nominal GDP = GDP deflator × real GDP
- inflation rate = growth rate of GDP deflator
- growth rate of nominal GDP = inflation rate + growth rate of real GDP

CONSUMER PRICE INDEX (CPI)

- CPI measures cost of living: cost in current dollars of the consumption basket of a typical urban consumer
- in the US: CPI is published since 1917 by the Bureau of Labor Statistics (BLS)
  - BLS collects prices for 211 items in 38 cities to construct CPI
- inflation rate = growth rate of CPI

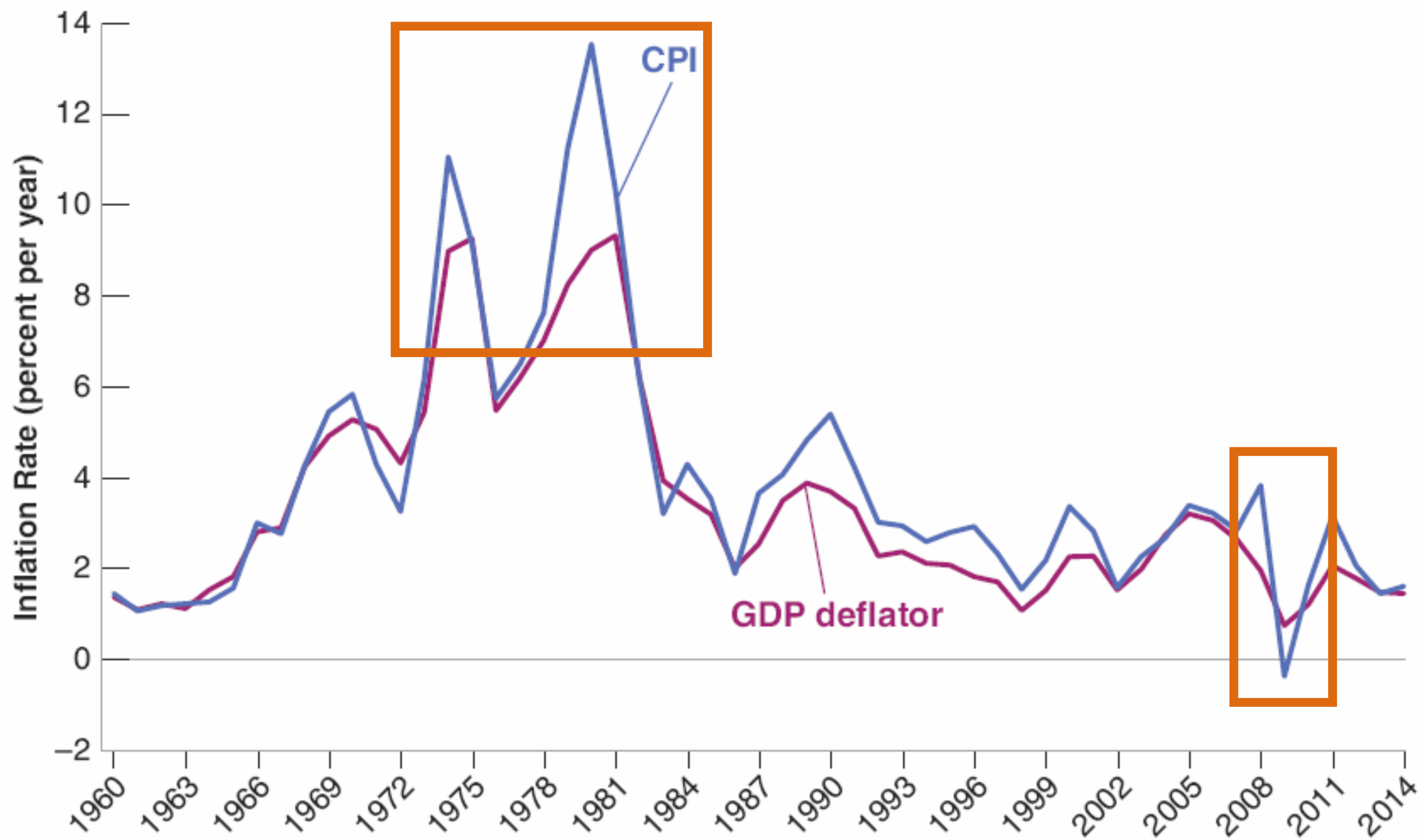
THE CPI BASKET: EXPENDITURE SHARES



CPI VERSUS GDP DEFLATOR

- discrepancy 1: goods produced in the economy (GDP) are different from goods purchased by consumers (CPI)
  - some goods in GDP are sold to firms (I), the government (G), or foreigners (NX), not to consumers
  - some goods in CPI are imported from abroad, not produced domestically
- discrepancy 2: the basket of goods is fixed in CPI but variable in GDP deflator
  - because the composition of GDP varies over time

YET, CPI AND GDP DEFLATOR MOVE TOGETHER



WHY DO WE CARE ABOUT INFLATION? CLASSICAL REASONS

- inflation affects the purchasing power of some people when not all prices/wages rise proportionally
  - some prices and wages are fixed by law (for instance, the minimum wage)
  - some price and wages are fixed by long-term contracts (for instance, some loans or pension payments)
- inflation distorts the tax system: income brackets are fixed
- inflation creates uncertainty

WHY DO WE CARE ABOUT INFLATION: PSYCHOLOGICAL REASONS

- people seem to strongly dislike inflation
- Robert Shiller (1996) conducted a survey of 600 households in Brazil, Germany, and the US
- 85% of respondents to the survey say that "when they go to the store and see that prices are higher, they sometimes feel a little angry at someone"
- they are usually angry at "manufacturers", "store owners" and "businesses", accused of "greed"
- https://www.nytimes.com/2014/03/14/world/americas/rocketing-prices-confound-an-argentina-racked-by-inflation.html

PRICES ARE INSUFFICIENT: NEED TO LOOK AT QUEUES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